(r) For fluorinated heat transfer fluid emissions, inputs to the fluorinated heat transfer fluid mass balance equation, Equation I–16 of this subpart, for each fluorinated heat transfer fluid used.

(s) Where missing data procedures were used to estimate inputs into the fluorinated heat transfer fluid mass balance equation under § 98.95(b), the number of times missing data procedures were followed in the reporting year, the method used to estimate the missing data, and the estimates of those data.

(t) A brief description of each ''best available monitoring method'' used according to § 98.94(a), the parameter measured or estimated using the method, and the time period during which the ''best available monitoring method'' was used.

(u) For each fluorinated heat transfer fluid used, whether the emission estimate includes emissions from all applications or from only the applications specified in the definition of fluorinated heat transfer fluids in § 98.98.

(v) For reporting year 2012 only, the date on which you began monitoring emissions of fluorinated heat transfer fluids whose vapor pressure falls below 1 mm Hg absolute at 25 °C. This is either January 1, 2012 or March 23, 2012.

[75 FR 74818, Dec. 1, 2010, as amended at 77 FR 10381, Feb. 22, 2010]

§ 98.97 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain the following records:

(a) All data used and copies of calculations made as part of estimating gas consumption and emissions, including all spreadsheets.

(b) Documentation for the values used for fluorinated GHG and N_2O utilization and by-product formation rates. If you use facility-specific and recipe-specific utilization and by-product formation rates, the following records must also be retained, as applicable:

(1) Complete documentation and final report for measurements for recipe-specific utilization and by-product formation rates demonstrating that the values were measured using International SEMATECH #06124825A–ENG (incorporated by reference, see § 98.7) or, if the measurements were made prior to January 1, 2007, International SEMATECH #01104197A–XFR (incorporated by reference, see § 98.7).

(2) Documentation that recipe-specific utilization and by-product formation rates developed for your facility are measured for recipes that are similar to those used at your facility, as defined in § 98.98. The documentation must include, at a minimum, recorded to the appropriate number of significant figures, reactor pressure, flow rates, chemical composition, applied RF power, direct current (DC) bias, temperature, flow stabilization time, and duration.

(3) Documentation that your facility's N_2O measurements are representative of the N_2O emitting processes at your facility.

(4) The date and results of the initial and any subsequent tests to determine utilization and by-product formation rates.

(c) Documentation for the facility-specific engineering model used to apportion fluorinated GHG and N_2O consumption. This documentation must be part of your site GHG Monitoring Plan as required under § 98.3(g)(5). At a minimum, you must retain the following:

(1) A clear, detailed description of the facility-specific model, including how it was developed; the quantifiable metric used in the model; all sources of information, equations, and formulas, each with clear definitions of terms and variables; and a clear record of any changes made to the model while it was used to apportion fluorinated GHG and N_2O consumption across individual recipes (including those in a set of similar recipes), process sub-types, and/or process types.

(2) Sample calculations used for developing a recipe-specific, process sub-type-specific, or process type-specific gas apportioning factors (f_{ij}) for the two fluorinated GHGs used at your facility in the largest quantities, on a mass basis, during the reporting year.

(d) For each abatement system through which fluorinated GHGs or N_2O flow at your facility, for which you are reporting controlled emissions, the following:

(1) Documentation to certify the abatement system is installed, maintained, and operated in accordance with manufacturers' specifications.

(2) Abatement system calibration and maintenance records.

(3) Where the default destruction or removal efficiency value is used, documentation from the abatement system supplier describing the equipment's designed purpose and emission control capabilities for fluorinated GHG and N_2O.

(4) Where properly measured DRE is used to report emissions, dated certification by the technician who made the measurement that the destruction or removal efficiency is calculated in accordance with methods in EPA 430–R–10–003 (incorporated by reference, see §98.7), complete documentation of the results of any initial and subsequent tests, and the final report as specified in EPA 430–R–10–003 (incorporated by reference, see §98.7).

(e) Purchase records for gas purchased.

(f) Invoices for gas purchases and sales.

(g) Documents and records used to monitor and calculate abatement system uptime.

(h) GHG Monitoring Plans, as described in §98.3(g)(5), must be completed by April 1, 2011. You must update your GHG Monitoring Plan to comply with §98.94(c) consistent with the requirements in §98.3(g)(5)(iii).

§98.98 Definitions.

Except as provided in this section, all of the terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part. If a conflict exists between a definition provided in this subpart and a definition provided in subpart A, the definition in this subpart takes precedence for the reporting requirements in this subpart.

Abatement system means a device or equipment that destroys or removes fluorinated GHGs and N_2O in waste streams from one or more electronics manufacturing production processes.

Actual gas consumption means the quantity of gas used during wafer/substrate processing over some period based on a measured change in gas container weight or gas container pressure or on a measured volume of gas.

By-product formation means the creation of fluorinated GHGs during electronics manufacturing production processes or the creation of fluorinated GHGs by an abatement system. By-product formation is the ratio of the mass of the by-product formed to the mass flow of the input gas, where, for multi-fluorinated-GHG recipes, the denominator corresponds to the fluorinated GHG with the largest mass flow.

Chamber cleaning is a process type that consists of the process sub-types defined in paragraphs (1) through (3) of this definition.

(1) In situ plasma process sub-type consists of the cleaning of thin-film production chambers, after processing substrates, with a fluorinated GHG cleaning reagent that is dissociated into its cleaning constituents by a plasma generated inside the chamber where the film is produced.

(2) Remote plasma process sub-type consists of the cleaning of thin-film production chambers, after processing substrates, with a fluorinated GHG cleaning reagent dissociated by a remotely located plasma source.

(3) In situ thermal process sub-type consists of the cleaning of thin-film production chambers, after processing substrates, with a fluorinated GHG cleaning reagent that is thermally dissociated into its cleaning constituents inside the chamber where thin films are produced.

Class means a category of abatement systems grouped by manufacturer model number(s) and by the gas that the system abates, including N_2O and carbon tetrafluoride (CF_4) direct emissions and by-product formation, and all other fluorinated GHG direct emissions and by-product formation. Classes may also include any other abatement systems for which the reporting facility wishes to report controlled emissions provided that class is identified.

Controlled emissions means the quantity of emissions that are released to the atmosphere after application of an emission control device (*e.g.*, abatement system).

Destruction or removal efficiency (DRE) means the efficiency of an abatement